Application No.: 09/477,244
Office Action Dated: June 16, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A computer-readable medium comprising computer readable instructions to instruct a computer to process a data structure stored on the computer-readable medium, wherein the data structure comprises one or more fields containing the information that describes a first musical composition, the computer-readable medium further comprising computer-readable instructions for selecting the first musical composition from among the plurality of other musical compositions that are similar to the first musical composition, wherein the information comprises a plurality of classification values, each [[that]] distinguishing among a particular subjective feature[[s]]

of the musical compositions.

2. (original) A computer-readable medium as recited in Claim 1, wherein the

classification values comprise at least one song attribute.

3. (original) A computer-readable medium as recited in Claim 1, wherein the song attribute comprises at least one song attribute value indicating Weight, Intensity, Chord Movement, Range, Harmony, Density, Expressiveness, Flow, Melodic Movement, Mood Description, Consonance, Mood, Dynamics, Language, Ethnic Flavor, or Style.

4. (original) A computer-readable medium as recited in-Claim 1, wherein the song attribute comprises at least one song attribute value indicating Flexibility, Beat, Time Signature, Rhythm Type, or Rhythm Description, or Tempo.

5. (original) A computer-readable medium as recited in Claim 1, wherein the song attribute comprises at least one rhythm type value having a value of Straight 4, Shuffle,

Swing, Disco, Reggae, or Hip Hop Shuffle.

6. (original) A computer-readable medium as recited in Claim 1, wherein the song attribute comprises at least one rhythm description value having a value of Rockin', Frenetic, Steady, Throbbing, Free, Funky, Groovy, Syncopated, or Stiff.

Application No.: 09/477,244
Office Action Dated: June 16, 2004

7. (original) A computer-readable medium as recited in Claim 1, wherein the classification values further comprise one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition.

- 8. (original) A computer-readable medium as recited in Claim 1, wherein each of the voice values is at least one of Raspy, Sweet, Sultry, Whiny, Forceful, Aggressive, Monotonous, Clear, Processed, Jangly, Shimmering, Thick, Thin, or Lush.
- 9. (original) A computer-readable medium as recited in Claim 1, wherein the classification values comprise a mood value of Dreamy, Soothing, Fun, Depressing, Angry, Lonely, Creepy, Groovy, Uplifting, Sexy, Rockin', or Neutral.
- 10. (original) A computer-readable medium as recited in Claim 1, wherein the classification values further comprise one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.
- 11. (original) A computer-readable medium as recited in Claim 1, wherein the classification values further comprise one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Prominence, Ornamentation, Beat, Presence, or Flow.
- 12. (original) A computer-readable medium as recited in Claim 1, wherein the classification values further comprise one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.

Application No.: 09/477,244

Office Action Dated: June 16, 2004

13. (original) A computer-readable medium as recited in Claim 1, wherein the classification values further comprise a first voice value that identifies a first voice of a plurality of voices present in the first musical composition, and wherein the voice value is associated with a harmony value that identifies a second voice among the plurality of voices with which the first voice harmonizes.

14. (original) A method of creating stored information that describes a first musical composition for use in selecting the first musical composition from among a plurality of other musical compositions that are similar to the first musical composition, according to a plurality of classification values that distinguish among features of similar kinds of musical compositions, comprising the steps of:

receiving musical information from the first musical composition and determining its features;

creating and storing a new set of the classification values for the first musical composition based on the features that are determined; and

reviewing the new set of classification values based on quality control criteria.

- 15. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one song attribute.
- 16. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one song attribute value indicating Weight, Intensity, Chord Movement, Range, Harmony, Density, Expressiveness, Flow, Melodic Movement, Mood Description, Consonance, Mood, Language, Dynamics, Ethnic Flavor, or Style.
- 17. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one song attribute value indicating Flexibility, Beat, Time Signature, Rhythm Type, Tempo, or Rhythm Description.

Application No.: 09/477,244
Office Action Dated: June 16, 2004

18. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one rhythm type value having a value of Straight 4, Shuffle, Swing, Disco, Reggae, or Hip Hop Shuffle.

- 19. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one rhythm description value having a value of Rockin', Frenetic, Steady, Throbbing, Free, Funky, Groovy, Syncopated, or Stiff.
- 20. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition.
- 21. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one voice values of Raspy, Sweet, Sultry, Whiny, Forceful, Aggressive, Monotonous, Clear, Processed, Jangly, Shimmering, Thick, Thin, or Lush.
- 22. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing at least one mood value of Dreamy, Soothing, Fun, Depressing, Angry, Lonely, Creepy, Groovy, Uplifting, Rockin', Neutral, or Sexy.
- 23. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.
- 24. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of

Application No.: 09/477,244
Office Action Dated: June 16, 2004

which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Prominence, Ornamentation, Beat, Presence, or Flow.

25. (original) A method as recited in Claim 14, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.

26. (original) A method as recited in Claim 14, wherein creating and storing the classification values further comprises creating and storing a first voice value that identifies a first voice of a plurality of voices present in the first musical composition, and wherein the voice value is associated with a harmony value that identifies a second voice among the plurality of voices with which the first voice harmonizes.

27. (original) A method of matching information that describes a first musical composition to stored information that describes a plurality of other musical compositions that are similar to the first musical composition, wherein the stored information comprises a plurality of classification values that distinguish among features of similar kinds of musical compositions, comprising the steps of:

receiving first musical information that describes the first musical composition and that includes a first set of classification values based on features of the first musical composition;

receiving second musical information that describes the plurality of other musical compositions and determining their features;

creating and storing a second set of the classification values for the plurality of other musical compositions based on the features that are determined;

matching the first musical information to the second musical information based on the classification values; and

creating and storing a list of one or more matching musical compositions selected from among the plurality of other musical compositions based on the matching step.

Application No.: 09/477,244
Office Action Dated: June 16, 2004

28. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one song attribute.

- 29. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one song attribute value indicating Weight, Intensity, Chord Movement, Range, Harmony, Density, Expressiveness, Flow, Melodic Movement, Mood Description, Consonance, Mood, Language, Ethnic Flavor, Style, or Dynamics.
- 30. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one song attribute value indicating Flexibility, Beat, Time Signature, Rhythm Type, Tempo, or Rhythm Description.
- 31. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one rhythm type value having a value of Straight 4, Shuffle, Swing, Disco, Reggae, or Hip Hop Shuffle.
- 32. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one song attribute that comprises at least one rhythm description value having a value of Rockin', Frenetic, Steady, Throbbing, Free, Funky, Groovy, Syncopated, or Stiff.
- 33. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices or instruments present in the first musical composition.
- 34. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one voice values of Raspy,

Application No.: 09/477,244

Office Action Dated: June 16, 2004

Sweet, Sultry, Whiny, Forceful, Aggressive, Monotonous, Clear, Processed, Jangly, Shimmering, Thick, Thin, or Lush.

35. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing at least one mood value of Dreamy, Soothing, Fun, Depressing, Angry, Lonely, Creepy, Groovy, Uplifting, Rockin', Neutral, or Sexy.

- 36. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.
- 37. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Prominence, Ornamentation, Beat, Presence, or Flow.
- 38. (original) A method as recited in Claim 27, wherein creating and storing the classification values comprises creating and storing one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.
- 39. (original) A method as recited in Claim 27, wherein creating and storing the classification values further comprises creating and storing a first voice value that identifies a first voice of a plurality of voices present in the first musical composition, and wherein the voice value is associated with a harmony value that identifies a second voice among the plurality of voices with which the first voice harmonizes.

Application No.: 09/477,244
Office Action Dated: June 16, 2004

40. (original) A method as recited in Claim 27, further comprising weighting each

of the classification values using a pre-defined weight value prior to carrying out the

matching step.

41. (original) A method as recited in Claim 27, further comprising weighting each

of the classification values based on prior matches of the first musical composition to

other musical compositions that are associated with a particular client prior to carrying out

the matching step.

42. (original) A method as recited in Claim 27, wherein the matching step

comprises computing a difference value of each a pair of associated classification values

of the first information and the second information, computing a square of the difference

values, and computing a sum of the differences.

43. (original) A method as recited in Claim 27, wherein the matching step

comprises matching musical compositions selected from among the plurality of other

musical compositions based on a plurality of pairs of associated classification values.

44. (original) A method as recited in Claim 33, wherein the matching step

comprises matching musical compositions selected from among the plurality of other

musical compositions based on a plurality of pairs of associated classification values and

by additionally using pre-defined metadata that defines one of the voices as similar to

another of the voices.

45. (original) A method as recited in Claim 27, wherein the matching step

comprises matching musical compositions selected from among a plurality of other musical

compositions based upon a plurality of pairs of associated classification values and by

additionally using pre-defined metadata that defines one of the rhythm types as similar to

another of the rhythm types.

46. (original) A method as recited in Claim 27, wherein the matching step

comprises matching musical compositions selected from among a plurality of other

Application No.: 09/477,244
Office Action Dated: June 16, 2004

musical compositions based upon a plurality of pairs of associated classification values and by additionally using pre-defined metadata that defines one of the rhythm descriptions as similar to another of the rhythm descriptions.

47. (original) A method as recited in Claim 27, wherein the matching step comprises matching musical compositions selected from among a plurality of other musical compositions based upon a plurality of pairs of associated classification values and by additionally using pre-defined metadata that defines one of the rhythm time signatures as similar to another of the rhythm time signatures.

- 48. (original) A method as recited in Claim 27, wherein the matching step comprises matching musical compositions selected from among a plurality of other musical compositions based upon a plurality of pairs of associated classification values and by additionally using pre-defined metadata that defines one of the mood descriptions as similar to another of the mood descriptions.
- 49. (original) A method as recited in Claim 27, wherein the matching step comprises matching musical compositions selected from among a plurality of other musical compositions based upon a plurality of pairs of associated classification values and by additionally using pre-defined metadata that defines one of the languages as similar to another of the languages.
- 50. (original) A method as recited in Claim 27, wherein the matching step comprises matching musical compositions selected from among a plurality of other musical compositions based upon a plurality of pairs of associated classification values and by additionally using pre-defined metadata that defines one of the ethnic flavors as similar to another of the ethnic flavors.
- 51. (original) A method as recited in Claim 27, wherein the matching step comprises matching musical compositions selected from among a plurality of other musical compositions based upon a plurality of pairs of associated classification values and by

Application No.: 09/477,244
Office Action Dated: June 16, 2004

additionally using pre-defined metadata that defines one of the styles as similar to another of the styles.

52. (original) A method as recited in Claim 27, further comprising the steps of suggesting a second musical composition that may be similar to the first musical composition by successively carrying out the matching step a plurality of times for a plurality of matching compositions, each of which is slightly different from the previous composition.

- 53. (original) A method as recited in Claim 27, further comprising the steps of selecting and audibly playing one of the musical compositions from a stored collection of the musical compositions based on the list.
- 54. (original) A graphical user interface useful for selecting a first musical composition from among a plurality of other musical compositions that are similar to the first musical composition, based on stored information that comprises a plurality of classification values that distinguish among features of the musical compositions, the graphical user interface comprising a plurality of graphical interface widgets that may be used to select a particular value for each of the classification values.
- 55. (original) A graphical user interface as recited in Claim 54, comprising a plurality of song attribute graphical user interface widgets, each of which is configured to set at least one song attribute value indicating Weight, Intensity, Chord Movement, Range, Harmony, Density, Expressiveness, Flow, Melodic Movement, Mood Description, Consonance, Mood, Language, Ethnic Flavor, Style, or Dynamics.
- 56. (original) A graphical user interface as recited in Claim 54, comprising a plurality of song attribute graphical user interface widgets, each of which is configured to set at least one song attribute value indicating Flexibility, Beat, Time Signature, Rhythm Type, Tempo, or Rhythm Description.

Application No.: 09/477,244

Office Action Dated: June 16, 2004

57. (original) A graphical user interface as recited in Claim 54, comprising a plurality of song attribute graphical user interface widgets, each of which is configured to set at least one rhythm type value having a value of Straight 4, Shuffle, Swing, Disco, Reggae, or Hip Hop Shuffle.

- 58. (original) A graphical user interface as recited in Claim 54, comprising a plurality of song attribute graphical user interface widgets, each of which is configured to set at least one rhythm description value having a value of Rockin', Frenetic, Steady, Throbbing, Free, Funky, Groovy, Syncopated, or Stiff.
- 59. (original) A graphical user interface as recited in Claim 54, comprising a plurality of voice graphical user interface widgets, each of which is configured to set one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition.
- 60. (original) A graphical user interface as recited in Claim 54, comprising a plurality of voice attribute graphical user interface widgets, each of which is configured to set one or more voice values, wherein each of the voice values is at least one of Raspy, Sweet, Sultry, Whiny, Forceful, Aggressive, Monotonous, Clear, Processed, Jangly, Shimmering, Thick, Thin, or Lush.
- 61. (original) A graphical user interface as recited in Claim 54, comprising a mood attribute graphical user interface widget configured to set a mood value of Dreamy, Soothing, Fun, Depressing, Angry, Lonely, Creepy, Groovy, Uplifting, Rockin', Neutral, or Sexy.
- 62. (original) A graphical user interface as recited in Claim 54, comprising one or more voice attribute graphical user interface widgets configured to set one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.

Application No.: 09/477,244
Office Action Dated: June 16, 2004

63. (original) A graphical user interface as recited in Claim 54, comprising one or more voice attribute graphical user interface widgets configured to set one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, arid wherein each of the voice values is associated with a plurality of voice attributes of Prominence, Ornamentation, Beat, Presence, or Flow.

- 64. (original) A graphical user interface as recited in Claim 54, comprising one or more voice attribute graphical user interface widgets configured to set one or more voice values, each of which identifies one of a plurality of voices present in the first musical composition, and wherein each of the voice values is associated with a plurality of voice attributes of Range, Intensity, Cleanliness, Rhythmic Activity, or Melodic Movement.
- 65. (original) A graphical user interface as recited in Claim 54, comprising one or more voice attribute graphical user interface widgets configured to set a first voice value that identifies a first voice of a plurality of voices present in the first musical composition, and wherein the voice value is associated with a harmony value that identifies a second voice among the plurality of voices with which the first voice harmonizes.
- 66. (original) A method of matching information that describes a first object to stored information that describes a plurality of other objects that are similar to the first object, wherein the stored information comprises a plurality of classification values that distinguish among features of similar kinds of objects, comprising the steps of:

receiving first information that describes the first object and that includes a first set of

classification values based on features of the first object;

receiving second information that describes the plurality of other objects and determining their features;

creating and storing a second set of the classification values for the plurality of other objects based on the features that are determined;

matching the first information to the second information based on the classification values; and

DOCKET NO.: 167501.2 / MSFT-0285

Application No.: 09/477,244 Office Action Dated: June 16, 2004

PATENT

creating and storing a list of one or more matching objects selected from

among the plurality of other objects based on the matching step.

67. (Previously presented) A method as recited in Claim 66, in which the first

object is a pre-recorded motion picture.

68. (Previously presented) A method as recited in Claim 66, in which the first

object is a book..

69. (Previously presented) A method as recited in Claim 66, in which the first

object is a television program.

70. (Previously presented) A method as recited in Claim 66, in which the first

object is a beverage.

71. (Previously presented) A method as recited in Claim 66, in which the first

object is a work of art.

72. (Previously presented) A method as recited in Claim 66, in which the first

object is a perfume.

73. (Previously presented) A method as recited in Claim 66, in which the first

object is a human model.

74. (Previously presented) A method as recited in Claim 66, in which the first

object is a game.

75. (Previously presented) A method as recited in Claim 66, in which the first

object is a food.

76. (Previously presented) A method as recited in Claim 66, in which the first

object is a piece of apparel.